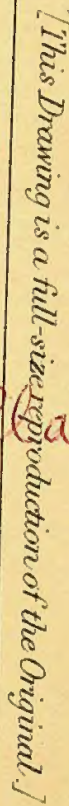


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Plan

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N° 23,088



Book Case Knobs
DUPLICATE
A.D. 1900

Date of Application, 18th Dec., 1900—Accepted, 23rd Feb., 1901

COMPLETE SPECIFICATION.

“Knock Down Furniture.”

I, WILLIAM STERLING GUNN, Manufacturer, of No. 29 Jefferson Avenue, Grand Rapids, Michigan, one of the United States of North America, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

- 5 This invention relates to improvements in knock down furniture and more particularly to book cases, and its object is to provide a book case or other article of furniture that may be readily assembled or taken apart, and reduced to a quantity of separate, flat parts without the use of tools of any kind; to provide a cheap, convenient, and stable structure; and to provide the same with
10 certain new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings, in which:—

Fig. 1 is a perspective of two sections of a book-case embodying my invention;

Fig. 2 an enlarged vertical section of the same;

- 15 Fig. 3 a detail, in plan view, showing the arrangement of the coupling irons in series;

Fig. 4 a detail in vertical section;

Fig. 5 a perspective of a bar for attaching the sections end to end;

- Fig. 6 details of the coupling plates for connecting the vertical series of
20 sections;

Fig. 7 a perspective detail of one end of an end piece; and

Fig. 8 a detail of the supports for the front.

Like letters refer to like parts in all the figures.

- a* are the ends, *b* are the backs, *c* the bottoms, and *d* the fronts of the respective
25 sections of the case.

The ends, backs and bottoms, when assembled, are securely and detachably held in place by means of the coupling plates illustrated most fully in Fig. 6.

- Each coupling plate consists of a thin plate *e* of suitable material, preferably cast or malleable iron, arranged horizontally between the respective sections
30 of the ends, and provided with oppositely projecting ribs *f*—*i* to engage grooves *m* in the adjacent ends, of the ends *a*, and also provided with lugs *k* at its respective upper and lower sides to engage recesses *n* in the ends *a*.

- These plates are thus made cruciform in cross-section, as shown in Fig. 4, and the inner edge of each plate is inserted in a horizontal groove in the end of
35 a shelf *r* and secured therein by suitable pins or fastenings *j*.

Each plate at the rear end is also provided with a hook *l* and, when placed end to end, the sections are coupled together by the coupling bars *p* adapted to rest on the top of two adjacent hooks *l* and having depending spurs *q* set-off inward to pass behind the hooks and engage the same.

- 40 The backs are provided with transverse tongues at each end, which tongues engage vertical grooves *o* in the ends *a*, to secure the backs in place.

"P" couple bars

Gunn's Knock Down Furniture.

and each shelf may be readily detached without the use of tools, or the formation of any small detached parts to become misplaced.

The front to each section consists of a suitable sash *d* having a glass panel therein, and is detachably mounted to turn from the vertical and closed position, to a horizontal position, and to run back into the top of the respective section, 5 by means of hooks *f* projecting inward from the upper part of the sash at each side and adapted to engage rolls *h* fixed in the ends *a*, and strips *g* on which the doors slide.

These hooks and rolls serve as pivots on which the front turns, and each front can be readily detached by lifting the same upward and outward. 10

Each sash is extended downward to abut against the upper edge of the sash below, and thus I am able to detach any front in the series without taking down the structure, by merely opening the one above it.

To form a tight joint between the respective fronts and permit free opening and closing the same, I form the upper edge of each sash convex on a radius 15 struck about the axis of the rolls *h*, as at *s*, and the lower edge with a concave form to correspond as at *t*.

The hooks *f* run back in contact with the inner side of the strips *g* and thus guide the fronts and thus prevent the same from binding.

The lower part of the fronts being supported by the rolls *h* and moving freely 20 thereon.

u are other strips arranged vertically near the front of the ends *a* to engage the fronts when closed.

The device is herein shown embodied in book case sections, but it is evidently adapted for use in any article consisting of a series of sections or compartments, 25 such as a bureau, cupboard, store shelving, and various other structures. I do not, therefore, limit myself to the particular structure shown.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:— 30

1. Forming detachable end sections with grooves and uniting them by interlocking ribbed and shouldered coupling plates and bars, as herein described with reference to the drawing.

2. In connection with Claim 1, projecting the coupling plates inward to serve as supports for a shelf or shelves, as herein described with reference to the 35 drawings.

3. In connection with Claim 1, providing the coupling plates with hooks and securing them by means of coupling bars engaging said hooks, as herein described with reference to the drawings.

4. In connection with the subject matter of Claim 1, forming the coupling 40 plates with ribs to engage the grooves in the ends of the shelves, lugs to engage recesses therein, and uniting them detachably by coupling bars, as herein described, with reference to the drawing.

5. A case, such as herein described, wherein strips are attached, rolls placed between the strips and the case, and hooks attached to the movable front, so that 45 when the front is closed said hooks engage the rolls, and when it is opened they traverse the side of the strips, as herein described, with reference to the drawing.

Dated this 17th day of December, 1900.